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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/161,981	09/29/1998	AKITAKA KIMURA	Q051885	8269

7590 02/26/2002

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EXAMINER

MULPURI, SAVITRI

ART UNIT

PAPER NUMBER

2812

DATE MAILED: 02/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/161,981**

Applicant(s)  
**Kimura**

Examiner  
**Savitri Mulpuri**

Art Unit  
**2812**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1) ☒ Responsive to communication(s) filed on 2/1/02, petition to rest the period for reply

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

4) ☒ Claim(s) 1-26 is/are pending in the application.

4a) Of the above, claim(s) 5-8 and 18-26 is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-4 and 9-17 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some\* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_

20) ☐ Other:

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### **DETAILED ACTION**

This repeated action is in reponse tot the applciant's pettion to restart the period for reply due to late receipt of an office action , filed on 2/1/02.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4,9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art in combination with Kamiyama et al '638

Admitted prior art teaches the same sequence and same composition of layers 104-110, as claimed, with nitride based semiconductor layer of first conductivity type layer, nitride based active layer, and nitride based p-type layer, nitride based semiconductor layer "214"; depositing and patterning the silicon oxide mask "215" having a hole on the layer "214"; selectively growing a semiconductor layer "111" in the hole using silicon oxide as mask on a semiconductor layer "214"(see fig. 8 and 9 as captioned as prior art and pages 5-9). However, Admitted prior art lacks only one claimed limitation, such as using nitride mask as an alternative to silicon oxide mask. Kamiyama et al discloses forming silicon nitride stripe-shaped mask as alternative to silicon oxide

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stripe-shaped mask and then growing epitaxial layer using nitride mask(see claims 1-4) . It would have been obvious to one of ordinary skill in the art to form silicon nitride in the invention of Admitted prior art because Kamiyama discloses forming functionally equivalent nitride mask as alternative to oxide mask to grow epitaxial layer. Note filing date of Kamiyama et al is 1/19/96 and effective filing date of the priority document of the instant application is 9/27/97.

Applicant's arguments with respect to claims 1-4, 9-17 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mulpuri whose telephone number is (703) 305-5184. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
SAVITRI MULPURI  
PRIMARY EXAMINER